

## Claims

1. Polarization separator for high-frequency waves guided in a waveguide with an input section (2), in which two orthogonally polarized wave types are capable of propagating, two first output sections (3, 3'), separated by a septum (4) and extending in an extension of the input section (2) for a first wave type, and two second output sections (6, 6'), extending sideward in the plane of the septum (4) for the second wave type, characterized by the fact that the second output sections (6, 6') are designed as coaxial conductors.
2. Polarization separator according to Claim 1, characterized by the fact that the septum (4) has a tapering front section (5), and that the second output sections (6, 6') lead into the input section (2) between the tip (19) and base (20) of the front section (5).
3. Polarization separator according to Claim 1 or 2, characterized by the fact that the input section (2) is provided on its walls with inward protruding ridges (10, 11, 12, 13), oriented in the longitudinal direction.
4. Polarization separator according to Claim 3, characterized by the fact that the ridges on those walls of the input section (2), to which the second output sections (6, 6') do not lead, are lengthened into the first output sections (3, 3').
5. Polarization separator according to Claim 3 or 4, characterized by the fact that a step (18) is formed, at the transition between the input section (2) and the first output sections (3, 3'), and that the ridges (14, 15) extend from step (18) only over part of the length of the input section (2).
6. Polarization separator according to one of the preceding claims, characterized by the fact that the coaxial conductors (6, 6') have an internal conductor (7) that carries a bead (8) on its end protruding into the input section.